

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 October 2004 (21.10.2004)

PCT

(10) International Publication Number
WO 2004/089210 A1

(51) International Patent Classification⁷: **A61B 5/0452**

(21) International Application Number:
PCT/FI2004/050034

(22) International Filing Date: 2 April 2004 (02.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
20030547 10 April 2003 (10.04.2003) FI

(71) Applicant and

(72) Inventor: **KORHONEN, Pentti** [FI/FI]; Vaahteratie 6,
FIN-36200 Kangasala (FI).

(74) Agent: **TAMPEREEN PATENTTITOIMISTO OY**;
Hermiankatu 12 B, FIN-33720 Tampere (FI).

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

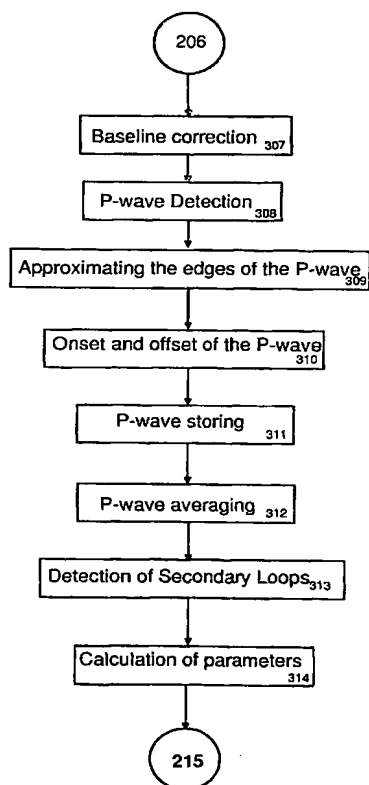
(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR ANALYSING THE P-WAVE OF AN ECG-SIGNAL



(57) Abstract: The invention relates to a method, to a system and to a computer program product for the cardiac analysis. The method comprises steps for acquiring the ECG-signal in the form of vectorcardiography, detecting wave from the ECG-signal by a template method and calculating the parameter values of the P-wave preferably continuously during the ECG-recording. The method is aimed to the dynamic changes of the Rwave, wherein substantially every detected P wave is compared to the reference P-wave in defined time period. The cardiac analysis system according to the invention is configured to implement the aforementioned method. The computer program product comprises computer program code for implementing the aforementioned method.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.